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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,650	04/09/2004	Makoto Ouchi	MIPFP086	8796
25920 7590 02/22/2008 MARTINE PENILLA & GENCARELLA, LLP 710 LAKEWAY DRIVE SUITE 200 SUNNYVALE, CA 94085			EXAMINER VANCHY JR, MICHAEL J	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 02/22/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/821,650

Applicant(s)

OUCHI ET AL.

Examiner

Michael Vanchy Jr.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,7-13,15 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,7-13,15 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 12/11/2007 have been fully considered but they are not persuasive.
2. Claims 1, 4, 6, 14, and 27 (claims 16-26, 29, and 30 were previously canceled) have been canceled.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 2, 3, 5, 7, 8, 10-13, 15, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et al., 5,649,032 as applied to claim 4 above, and further in view of Katayama et al., 5,982,951.

**Regarding claim 2**, Burt teaches an image generating method for generating a composite image from a plurality of original images (Burt, Fig. 2A-C, col. 17, lines 26-37), the method comprising: determining a plurality of partial original images for inclusion in the composite image to be generated, and included in any of the plurality of original images (Burt, Fig. 2A-C, col. 17, lines 26-37); and performing a predetermined process for generating the composite image on a predetermined processing area of the original image that includes the partial original image (Burt, Fig. 2A-C, col. 17, lines 26-37); without performing the process on portions outside the processing area, to generate the composite image based on the plurality of partial original images (Burt, Fig. 2A-C, Fig. 5, items "500, 502, and 508"). Burt however, is silent on calculating pixel tone values.

Katayama teaches the processing area being equivalent to an area of the partial original image, and the process for generating the composite image calculating pixel tone values, wherein the generating of the composite image includes calculating a tone value of each pixel making up the composite image, based on the tone value of each pixel making up the plurality of partial original images, without calculating tone values of pixels not included in the composite image (Abstract, Figs. 13 and 14 and claim 1).

Therefore it would be clear to one of ordinary skill in the art to at the time of the invention to modify Burt to calculate pixel tone values for a more smooth, clear, and accurate composite image.

**Re claim 3**, image generating method according to claim 2 wherein the processing area includes: an area included within the original image and within a range

of predetermined distance from the perimeter of the partial image, and the area of the partial original image (Burt, Fig. 2A-C, Fig. 5, items "500, 502, and 508").

**Re claim 5**, image generating method according to claim 2 wherein the composite image has higher density of pixels making up the image than does the low-resolution image (Burt, Fig. 4, item "416" and col. 6, lines 26-45), and an area extending beyond an area of any one of the original images (Burt, Fig. 2A-C, Fig. 5, items "500, 502, and 508").

Although Burt is silent on "higher density of pixels" however does mention changing the resolution of the input image to a resolution of the mosaic. The examiner takes into account that a higher resolution results in a "higher density of pixels." Thus, increasing the resolution is increasing the density of pixels.

**Re claim 7**, image generating method according to claim 2 wherein the plurality of original images mutually include portions recording a same given subject (Burt, Fig. 2A-C, col. 17, lines 26-37), and the step of determining partial original images comprises the steps of:

- (a) performing resolution conversion for the plurality of original images, to generate a plurality of low-resolution images of resolution lower than the original images (Burt col. 7 line 65, "*the lowest resolution level is selected in both image pyramids...*");
- (b) based on portions in the low-resolution image recording the same given subject, determining from areas of the plurality of low-resolution images a composite area equivalent to the sum of the areas of the low-resolution images (Burt Fig. 2A-C);

(c) determining within the composite area an image generation area extending beyond an area of any one of the low-resolution images (Burt, Fig. 2A-C, Fig. 5, items "500, 502, and 508"); and

(d) determining, as the partial original images, portions of the original images corresponding to low-resolution partial images which are portions of the low-resolution images and included in the image generation area (Burt Fig. 4, and Fig. 9).

**Re claim 8**, image generating method according to claim 7 wherein the partial original image, when subjected to conversion of the resolution, is to generate an image equivalent to one of the low-resolution partial images, and the step (d) comprises the step of determining the partial original image based on relationship between the low resolution partial image and the low resolution image, on and the plurality of original images (Burt, Fig. 4, item "404" and col. 6, lines 26-45).

**Re claim 10**, image generating method according to claim 7 wherein the step (b) comprises the step of

(b1) based on the portions recording the same given subject, calculating relative positions of the plurality of low-resolution images (Burt, Fig. 4, item "414"), and the step

(c) comprises the steps of

(c1) displaying as the composite area on a display unit (Burt Fig. 1, item "104") the plurality of low-resolution images according to the relative positions thereof (Burt Fig. 7, col. 12 line 44 to col. 13 line 9),

(c2) provisionally establishing the image generation area (Burt Fig. 5, items "504, 508 and 506 and 510" and Fig. 9 item "904");

(c3) displaying on the display unit (Burt Fig. 1, item "104") the provisionally established image generation area, shown superimposed on the plurality of low-resolution images (Burt Fig. 5 items "508 and 510");

(c4) resetting the image generation area (Burt Fig. 5, item "520"); and

(c5) determining the reset image generation area as the image generation area (Burt Fig. 5, items "520 and 524").

**Re claim 11**, image generating method according to claim 10 wherein the step (b1) comprises the steps of: (b2) receiving user instruction in regard to general relative position of the plurality of low-resolution images; and (b3) based on relative position instructed by the user, calculating relative position of the plurality of low-resolution images so that deviation among the portions thereof recording the same given subject is within a predetermined range (Burt, Fig. 5, and col. 10, lines 59-67).

**Re claim 12**, image generating method according to claim 11 wherein the step (b2) comprises the step of displaying on a display unit (Burt Fig. 1, item "104") at least two of the low-resolution images, and the instruction regarding general relative position of the plurality of low-resolution images is accomplished at least in part by the user moving one of the two low-resolution images displayed on the display unit, onto the other low-resolution image so that they partially overlap (Burt Fig. 7, col. 12 line 44 to col. 13 line 9).

**Re claim 13**, image generating method according to claim 11 wherein the step (b2) comprises the step of receiving, by way of instruction in regard to the relative position of the plurality of low-resolution images, instruction relating to sequential order

of the plurality of low-resolution images in a predetermined direction, and the step (b1) further comprises (b4) a step of determining the relative position of the plurality of low-resolution images according to the sequential order (Burt, Fig. 2A-C, and col. 16 lines 1-10).

**Regarding claim 15**, see rejection made to claim 2, for it addresses the method of this device.

**Regarding claim 28**, see rejection made to claim 2, for it addresses the method of this computer-readable storage medium (Burt, col. 1 lines 15-36).

**4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et al., 5,649,032 as applied to claim 4 above, and further in view of Manickam et al., 6,067,384.**

Burt is silent on reducing the "pixel pitch" or amount of pixels in the original image to form a low-resolution image by 30%-80%. However, Manickam does state a method for reducing an original image's resolution by 37.5%, 50%, and 75% all that are within the range specified in the claim.

Re claim 9, image generating method according to claim 7 wherein the low-resolution image has a pixel density that is 30%-80% of a pixel density of the original image (Manickam et al., col. 6 lines 32-35).

Taking the combined teachings of Burt and Manickam it would be obvious to include a method that decreases the "pixel pitch" or amount of pixels of an original



image by 30%-80%, since this technique is well known in the art and results in the same outcome as the above mentioned claim.

### ***Response to Arguments***

5. Applicant's arguments filed 12/11/2007 have been fully considered but they are not persuasive.

6. The examiner would first like to point out that the applicant stated that the claims were anticipated by Burt et al. U.S. Patent No. 6,125,204, which is incorrect, as the first action points out the rejection was made by Burt et al., but U.S. Patent No. 5,649,032.

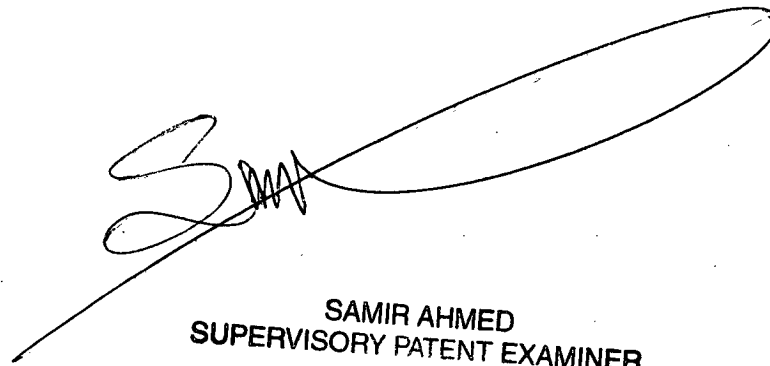
7. The applicant argues that Burt and Katayama do not disclose "not performing the process on portions outside the processing area" and "without calculating tone values of pixels included in the composite image." The examiner respectfully disagrees. The applicant states the processing area "may" include...which is indefinite allowing for the processing area to include where the original and partial overlap. This is depicted by Burt in Figures 2A-2C, where the processing area is the overlap and thus the process is only being performed on the processing area.

8. With regard to the calculating tone values in the composite image the examiner points to the Abstract where, "The image combine apparatus then sets a tone correction area having a predetermined width such that the boundary of the two images is the center of the area, and performs tone correction within the area." Thus the area is predetermined and is included in the composite image (Figures 13 and 14). The applicant also states that Katayama uses both original images, however the examiner

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respectfully disagrees. Two images are used but then the overlapping region of the first and second images has partial images (claim 1), "identifying means for discriminating the overlapping region within the first and second images, and identifying a first partial image corresponding to the overlapping region of the first image and a second partial image corresponding to the overlapping region of the second image." Therefore, "partial images" are used and can be thought of as separate images, therefore having a combined total of four images creating a composite image.



**SAMIR AHMED**  
**SUPERVISORY PATENT EXAMINER**